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FACILITIES  
CORPORATION**

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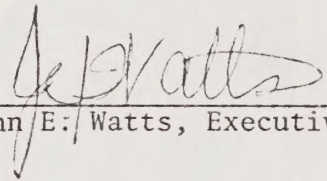
**CDA  
EVALUATION**




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THE AHCFC TRANSPORTATION SUPERVISOR WITH ONE OF THE FOUR VEHICLES



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## Introduction

### Problem Statement

Bayview-Hunters Point is to some degree a geographically and socially isolated community within the larger community of San Francisco. The effect of such isolation on poorer Bayview residents, particularly in regard to health care, can be and has been severely detrimental. Of the 28 hospitals in San Francisco, only 2 are in the same southwestern half of the city as the Bayview-Hunters Point community. The hospital most frequently used by BV-HP residents is San Francisco General, which is three miles by car from the center of the MNA. The average bus trip between Bayview-Hunters Point and San Francisco General can take two hours and involves two transfers. Taxi service, besides being too expensive for most BV-HP residents, isn't always available upon request in



the MNA. In short, because (1) medical facilities and health services within the community were not adequate to meet the health needs of its residents, (2) public transportation did not provide suitable service to the nearest commonly used medical facility, (3) MNA residents were often confronted with negative attitudes on the part of health providers, and (4) a high percentage of BV-HP residents are unemployed, MNA residents as a group have in the past suffered a high level of poor health.

Morbidity and mortality rates are generally higher in the BV-HP MNA than in the rest of the City. The infant mortality rate is higher, the low-weight birthrate is higher, and there is a greater incidence of other problems stemming from a lack of adequate nutrition. The incidence of mental health problems is higher than that of any other California community. The most prevalent MNA diseases are hypertension, heart disease, stroke, cancer, TB, VD, diabetes, and mental illness.

Some form of comprehensive health services was clearly needed in Bayview-Hunters Point, and it was in view of this situation that



these needs were cited as being most pressing:

- comprehensive outpatient services
- increased health personnel, especially physicians
- alleviation programs for drug addiction and hypertension
- health education programs
- improved transportation service to other health facilities

Although most of the groundwork for it had been laid in previous years, the Ambulatory Health Care Facilities Corporation (AHCFC) was formally established in December 1972 to provide BV-HP residents with a primary health care delivery system. The AHCFC is the Model Cities operating agency for health care services in the BV-HP MNA and is responsible for planning and implementing health services designed to improve the quality of health care for MNA residents.

As the vehicle through which the health level of BV-HP residents could be upgraded to a level consistent with other San Francisco residents, the AHCFC planned to:

- provide direct comprehensive health care services, including diagnosis and treatment
- provide transportation services in order to reduce the inaccessibility of health facilities to MNA residents



- provide home care services for chronically ill and home-bound residents
- construct a primary health care center in order to develop a health care delivery system for MNA residents

To a great extent, these original objectives determined the subsequent formation of four interdependent AHCFC divisions: Transportation, Home Care, the Southeast Ambulatory Health Center (SEAHC), and the Advisory Board project. Each of these four components operates cooperatively: the Transportation unit moves patients, the Home Care unit renders services at home, the Center offers diagnosis and treatment, and one of the Advisory Board's major concerns is the imminent construction of a health care facility in the MNA.

The predominant focus of this report is on two of the major AHCFC components: Transportation and Home Care. The SEAHC is not examined here because it does not receive CDA funding, other than modest sums for overhead costs.



The construction of the AHCFC facility is a sufficiently complex topic to warrant detailed treatment elsewhere, in a forthcoming report on the two BV-HP capital improvement projects sponsored wholly or in part by Model Cities funds.

#### Evaluation Methodology

Time Period. This period examined in this report is 12/1/72-6/30/75. Comments made here pertain only to this survey period. It is not the object of this evaluation to render an analysis of the current state of AHCFC affairs.

Evaluation Objectives. The basic objective of this report is, of course, to evaluate the nature and level of AHCFC achievement, primarily as compared to its prestated goals. Conclusions of this evaluation should reflect both on the degree to which past AHCFC planning was based on an accurate assessment of MNA needs and on the future probability of a close correlation between AHCFC objectives and BV-HP MNA needs. For the two components reviewed here--the Transportation unit and the Home Care Project--the evaluation attempts to judge not only the effectiveness of achievement but also the nature and quality of administrative structures and operational processes.



We hope that this evaluation will be perceived as a constructive attempt by relatively impartial observers to either reinforce basic project directions or to suggest new, useful alternatives.



## Organization

### The Concept

We can posit that any management process will consist at the very least of planning, organizing, and controlling activities. Probably of first concern is the purpose, the objective. To attain objectives, and to control an organization, policies are formulated and communicated. However, to translate the ideas of objectives and policies into tangible products or services, an organization must be developed that can execute policies and reify objectives. Effective planning of an organization probably involves at least these four, closely-related considerations:

What types of work or functions are necessary to attain objectives?

How may these functions be broken down most effectively into components and individual jobs?

What personnel qualifications are needed for performing these functions?

What physical facilities would enable personnel to perform functions effectively and economically?



To put answers to these questions into effect, necessary functions are assigned as duties to specific individuals, steps are taken to ensure that personnel are appropriately trained and equipped for the performance of their duties, and procedures are instituted to ensure that the organization's functions follow planned lines.

### Organizational Structure and Staffing

The complex, diverse nature of AHCFC component activities has dictated a more elaborate organizational structure than normal.

Key organizational entities include:

- The board of directors and its subcommittees
- The advisory board
- The AHCFC project administrator
- The supervisor of transportation and general services
- The coordinator of the home care project
- The fiscal officer
- The legal officer

The board of directors is composed of representatives from the immediate community, the San Francisco community at large, and



the formal governmental structure of the City and County of San Francisco. Initially comprising 15 members, it is now made up of 9 directors: 4 from the immediate BV-HP community, 4 from San Francisco at large, and 1 who is appointed by the Mayor. The role of the board of directors is to formulate all major policies necessary to effect ACHFC objectives.

The board also serves a special function as advisor to the community for the construction of the primary care facility. This, the Advisory Board Project, is intended to identify community needs, establish interinstitutional arrangements, seek funding, and, in general, recommend necessary operational mechanisms to advance construction of the health facility.

There are four board committees. The first, the Executive Committee, has the responsibility of making recommendations on internal board policies. It also occasionally acquires other ad hoc responsibilities and powers as specified by the board of directors.

The Personnel Committee sees that the corporation's



objectives are being met through proper exercise of staff functions and adherence to AHCFC personnel policies. Accordingly, it makes recommendations to the full board regarding hiring, suspending, and dismissing employees.

The primary responsibility of the Health Committee is the study of various health delivery systems and the making of recommendations to the board based on the applicability of these systems to BV-HP health problems.

The Finance Committee oversees the fiscal affairs of the corporation. It recommends fiscal priorities to the board and projects the effects of proposed budget changes.

The AHCFC project administrator is in charge of the overall operating activities of all components of the corporation. In regard to facility construction, the project administrator coordinates land acquisition, construction and program design, facilities requirements, and cost evaluation. The project administrator is an ex officio member of the board of directors; he or she has no voting powers.



The position of executive secretary has been abolished. Currently, the administrative assistant performs some of the tasks formerly assigned to the executive secretary. This position provides, under the supervision of the project administrator, assistance with: purchasing, various standing committees' tasks, office management, report writing, community liaison, data gathering, and other related duties as assigned by the project director.

The supervisor of transportation and general services manages activities of the Transportation Project. This includes employee supervision, report preparation, the development of guidelines and procedures, and coordination of such general services as maintenance and security.

The home care coordinator supervises activities required to provide child/adult care, housekeeping and homemaking services, and care for the elderly. This staffmember also ensures that home care personnel are distributed according to residents' needs and in a timely manner.



Kraai and Lumer, a private consultant, has been acting as AHCFC fiscal officer, providing services and recommendations on such fiscal matters as preparing budget proposals and analyzing cost performance.

The corporation's legal counsel is obliged to keep the AHCFC informed of, among other matters, pertinent legislation, rules and regulations governing licensure, insurance and tax exemptions or liabilities, and malpractice insurance.

Organizational Chart. Figure 1 graphs relationships between major AHCFC functions and shows their relationships, channels of supervision, and the relative authority of the staffmember in charge of each function. Figure 1 represents the basic AHCFC organizational structure in effect through 1974.

Figure 2 displays the same elements as Figure 1, but shows them within a much more detailed system that has been in effect through 1975. Relationships shown in Figure 2 reflect an interim organizational structure required for the eventual integration of the AHCFC with the San Francisco Public Health Department upon completion of the health care center.



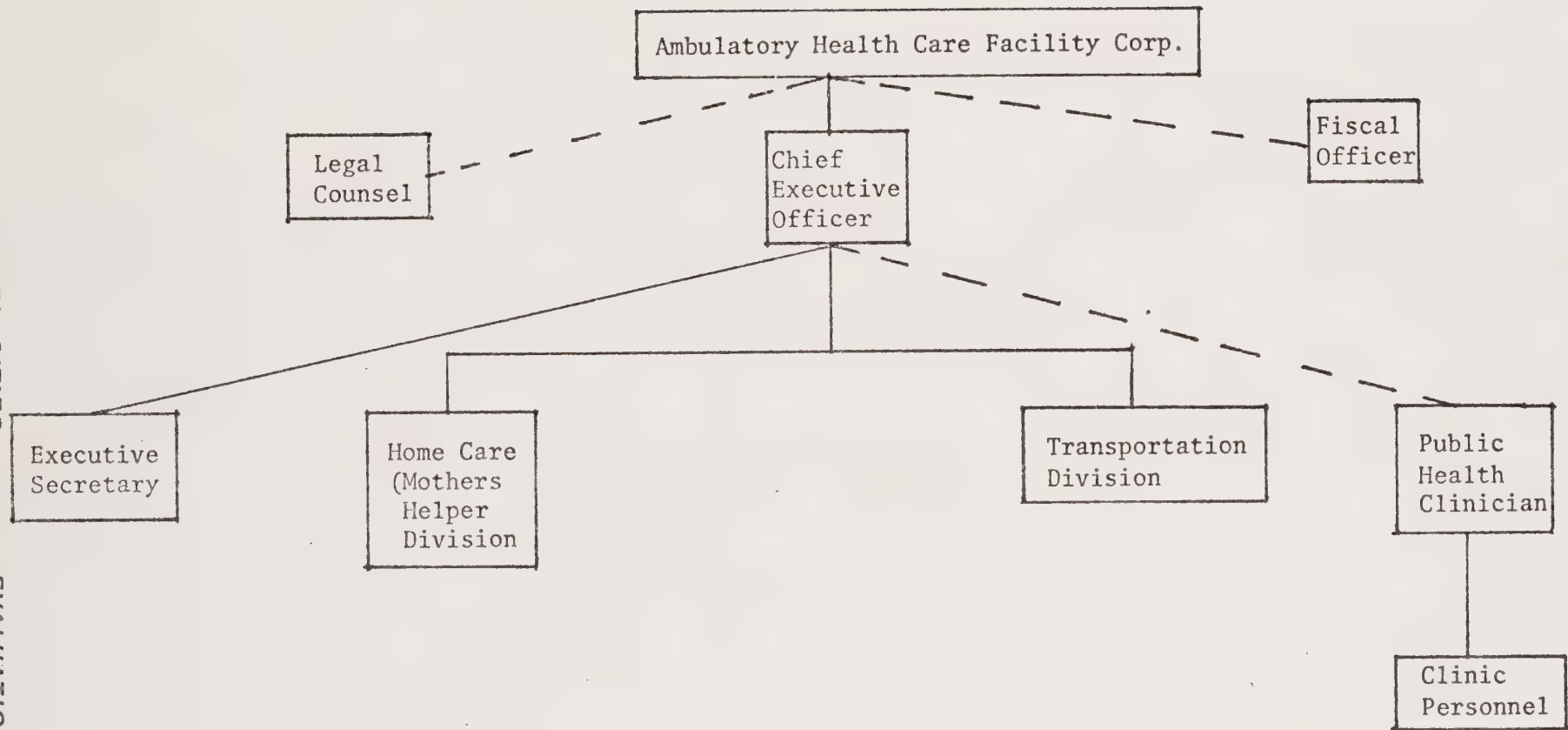


FIGURE 1: AHCFC ORGANIZATIONAL CHART



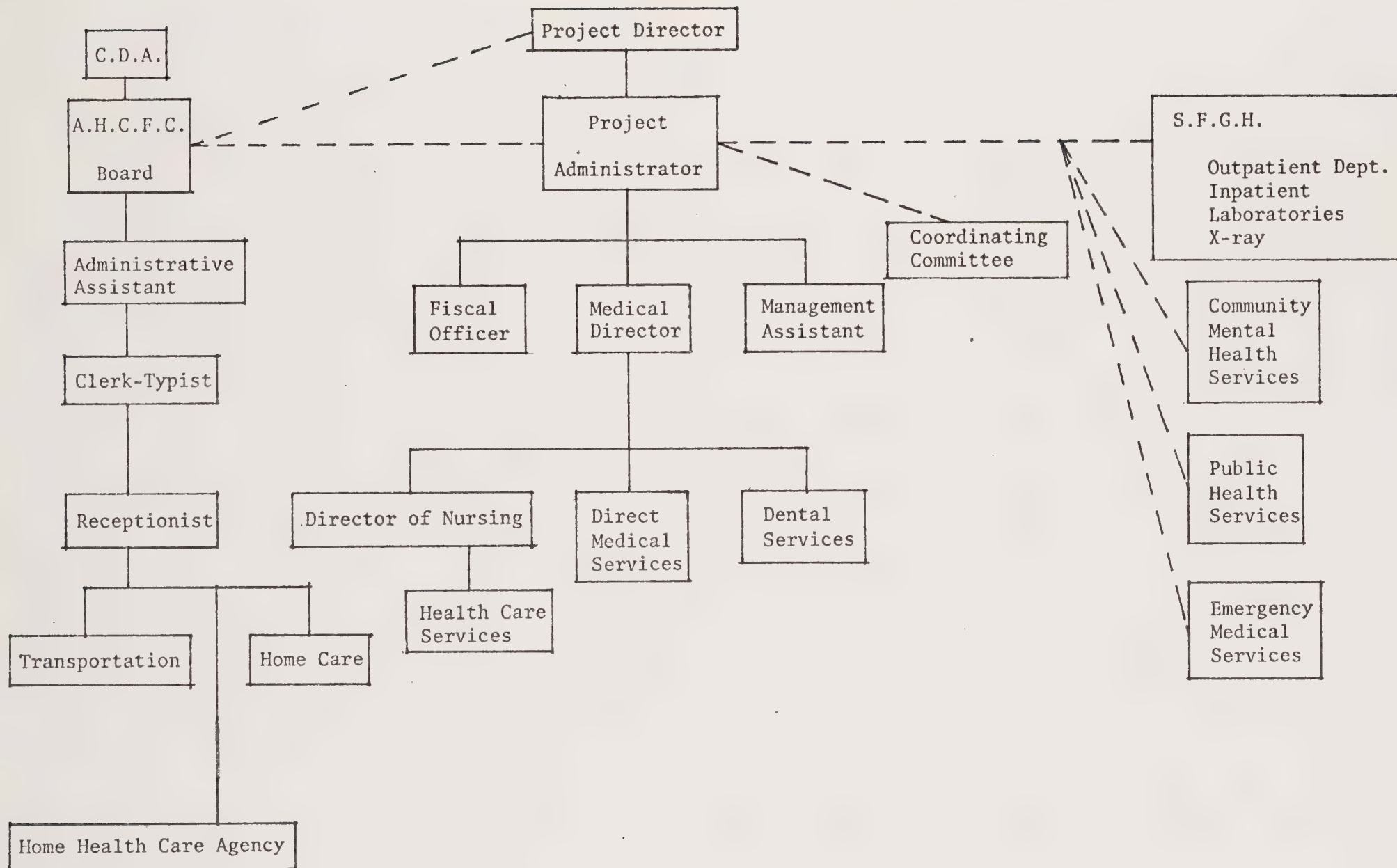


FIGURE 2: AHCFC ORGANIZATIONAL CHART



### Organizational Analysis

Formulation of Objectives. General AHCFC goals and objectives, as well as the more specific objectives of the separate components, seem reasonably well related to the stated health care problems of the BV-HP MNA. AHCFC management has effectively allocated appropriate responsibilities to its various components, and has made the inevitable periodic reappraisals that allow an organization to respond flexibly to new pressures and needs.

To ascertain whether staffmembers understood not only the specific objectives of their respective components but also the broader direction of the entire corporation, questionnaires were administered and were supplemented with direct interviews. These instruments tended to demonstrate that, while most staffmembers were very clear as to the objectives of their own components and as to the nature of their roles within those components, few had a clear picture of the broad, long-range goals of the corporation. Because the immediate result of these staffmembers' efforts may contribute only indirectly to overall AHCFC goals, AHCFC managers and supervisors should



intensify their efforts to communicate broader corporate perspectives to their staffs. Even though integration of the AHCFC with the San Francisco Department of Public Health will take place upon completion of the health care facility, and this integration will inevitably cause organizational rearrangement within the AHCFC, the corporation, which will probably be known as the Home Health Agency, will still remain as a discernible, functioning entity within the BV-HP community despite its ties with the Department of Public Health. To preserve lines of authority and responsibility, the corporation will still need some management and staff personnel.

Decentralization. Another concern is produced by the division of the AHCFC into a number of quasi-autonomous components. This division provides a greater sense of responsibility to component personnel, as well as clearer control over efficiency and other criteria of success, but it also causes a high degree of decentralization of authority. While it is certainly true that decentralization is not intrinsically dangerous, in the case of the AHCFC increased centralized control and coordination over separate components would foster a desirable uniformity of policies, practices, and decisions.



Effective Delegation. AHCFC management is generally making effective use of delegation. Good delegation exists when decisions are made at the lowest level capable of making them. Along with responsibility for functions goes the authority to make ordinary decisions regarding them. This involves more than simply dividing work up and assigning it to employees.

For the AHCFC, good delegation relieves those ultimately responsible for the corporation of detailed, routine matters, thus leaving them more time for managerial responsibilities. Employees are given the opportunity to think and to develop. Therefore, the desirable type of project administrator is someone who can delegate responsibility and authority, thus keeping his or her time free for assigning and coordinating work, handling special problems and emergencies, planning improvements, taking a personal interest in staffmembers, and working closely with other management personnel. The AHCFC approach to delegation involves these considerations:

- (1) Systematic appraisal of the duties performed in each unit with a view to assigning them at the lowest job level capable of handling them



- (2) The background, strengths, and limitations of those to whom responsibilities are delegated is known to AHCFC management
- (3) Every employee is adequately trained including familiarization with AHCFC policies and procedures
- (4) Each unit supervisor performs adequate follow-up work to ensure that work is performed properly

A final concept that has proven valuable to AHCFC managers in effectively allocating responsibility is the distinction between line and staff functions. Line functions are the primary functions that contribute most directly and vitally to corporate objectives. For the AHCFC, these include transporting patients, coordinating and providing home care services, providing diagnosis and treatment in the SEAHC unit, and promoting the construction of the primary care center.

Staff functions are the supporting activities needed to keep primary functions in operation. Examples are personnel management, fiscal management, and general administrative services.



The distinction between these two broad categories, which appears to have been clearly understood by AHCFC management, can help focus corporate emphasis on the common component purposes of (1) establishing a comprehensive health care delivery system, (2) concentrating staff efforts on contingent objectives, and (3) forming a basis for teamwork, to avoid overlapping or antithetical efforts.

AHCFC Personnel Sufficiency. There are indications that current staffing in the Transportation and Home Care Projects is not sufficient to meet the demands. Although the Transportation Project is in the process of acquiring two more vehicles and two more drivers, it is currently overloaded and, during special clinic days (Tuesday and Thursdays), is forced to concentrate all of its current resources just on transportation to and from San Francisco General Hospital and one rest home.

The Home Care Project is planning to cut service time for each client in order to try to meet increasing client requests.

The Home Care staff may be supplemented by additional personnel.



There is, in short, a discernible need not only for additional funding for additional staffmembers to meet increased community demand for services, but also for long-range planning of staff sufficiency, accompanied by a management and key personnel development program. It is anticipated that the AHCFC will experience not only the normal ups and downs in work volume that any organization encounters, but also a constantly increasing demand from the MNA, and planning should attempt to expedite adjustment of work assignments, personnel, and facilities allocation to compensate for shifts in work volume and flow.

#### Recommendations

There is a need for increased coordination between AHCFC units. Although the quasi-autonomous role of each component should be preserved as much as is possible, more centralized control of common priorities and scheduling is needed to focus upon the corporation's overall plans. This will mean that the project administrator will have to be in close touch with the activities and needs of each unit. Ideally, this will facilitate improved



organization and assignment of responsibilities to component supervisors, as well as the formulation of more appropriate standards of performance.

Improved AHCFC organization is expedited through use of graphic tools, such as work distribution charts, which show work assignments and job contents within each unit. These help analyze how staffmembers spend their time, and allow more time to be spent on more significant/necessary activities.



## The Transportation Project

A transportation program for Bayview-Hunters Point was first established in 1969 under the auspices of the federally funded Community Health Services. It was part of a two-component effort, called the Mother's Helper and Transportation Program. This component became part of the AHCFC in December 1972.

The project has been operating four ten-passenger vehicles equipped with two-way radios, lights, and folding ramps. A base station is located at the current AHCFC center, which dispatches vehicles in response to client requests. The project is staffed by one supervisor, two full-time drivers, one part-time driver, and one clerk, whose time is also



shared by the Home Care Project. Negotiations are currently underway to hire two more drivers and to purchase two more vehicles, which will be equipped for handicapped clients. Normal operating hours are from 8:00 a.m. to 5:00 p.m., Monday through Friday. Emergency ambulance service is available at any time.

The project uses the services of numerous physicians and dentists in San Francisco, and maintains close working relationships with several health care and social service facilities, such as the Department of Public Health, San Francisco General Hospital, the University of California Medical Center, the School of Dentistry of the University of the Pacific, the California College of Podiatry, the San Francisco Department of Social Services, and the San Francisco Board of Education.

#### Performance Measurements

In general, this section attempts to compare input with output for the Transportation Project. Although there is no absolute yardstick to express a desirable ratio between input and output for a project like this one, it can be stated that an increasingly



efficient operation should show a gradually greater output per constant amount of input.

Measuring the efficiency of Transportation Project operations is approached here from three closely correlated directions:

- (1) Output produced per given input by month and as a 31-month aggregate for the extended survey period of December 1, 1972, through June 30, 1975, was determined.
- (2) For the same extended period, costs of service were compared to value of services rendered, by month.
- (3) The degree to which available Transportation Project resources, i.e., vehicles, were utilized during this period was calculated.

Terms. To make quantitative comparisons, the services offered by the project must first be translated into measurable units. Naturally, it is understood that the true "output" of such a project embraces such things as contributing to the improvement of the overall MNA health level, but measuring such a broad, if very real, product is far beyond the scope of this study. However, even more limited, quantitative analyses should provide at least a partial indicator of the efficiency of this component.



Transportation is logically measured in units carried relative to the distance they are carried. Therefore, the standard output unit of this section is the patient- or passenger-mile, which equals one passenger carried one mile. Input refers here to the costs entailed by Transportation operations, both fixed and variable. (Fixed costs are independent of output; variable costs change with output volume fluctuations.) Transportation overhead costs include: staff compensation; professional and contractual fees; rental, lease, or purchase of office equipment; maintenance and improvements; travel; overhead; and miscellaneous expenses. Capital costs include purchase of four vehicles.

During the 31-month survey period, 7,001 trips were made and 10,116 patients were transported. A total of 125,176 miles were logged by Transportation vehicles. The monthly averages (see Table 1) are: 226 trips made, 326 passengers carried, 4,038 total miles, and 3,507 passenger-miles.

During the same period, \$143,442 was spent on operating costs, for a monthly average of \$4,627. An additional \$935 can be



## TRANSPORTATION OUTPUT AND INPUT

	No. of Clients Served	No. of Trips Made	Gross Mileage	Passenger Miles	Operating Cost	Cost of Equipment	Total Cost of Service
1972 - Dec.	168	140	2,274	1,912	4,565	935	5,500
1973 - Jan.	165	165	2,228	1,874	4,455	" "	5,390
Feb.	162	160	2,187	1,839	3,371	" "	4,306
Mar.	273	271	3,918	3,295	3,526	" "	4,461
Apr.	275	260	3,713	3,123	3,734	" "	4,669
May	280	271	3,782	3,181	3,697	" "	4,632
June	333	181	4,496	3,781	5,418	" "	6,353
July	307	174	4,145	3,486	3,340	" "	4,275
Aug.	282	168	3,579	3,010	3,898	" "	4,833
Sept.	278	191	3,753	3,153	4,718	" "	5,653
Oct.	298	197	4,023	3,383	3,330	" "	4,265
Nov.	319	203	4,307	3,705	3,828	" "	4,763
Dec.	313	202	4,226	3,579	3,799	" "	4,734
1974 - Jan.	264	239	3,564	3,029	5,414	" "	6,349
Feb.	227	206	3,065	2,482	3,803	" "	4,738
Mar.	267	258	3,605	3,032	4,171	" "	5,106
Apr.	308	310	4,158	3,576	3,749	" "	4,684
May	310	320	4,185	3,662	4,058	" "	4,993
June	322	316	4,347	3,695	4,818	" "	5,753
July	396	396	5,346	3,015	4,307	" "	5,242
Aug.	376	382	5,076	4,269	4,949	" "	5,884
Sept.	355	355	4,793	4,031	5,710	" "	6,645
Oct.	489	347	5,626	5,249	4,947	" "	5,882
Nov.	269	240	1,335	1,268	3,907	" "	4,842
Dec.	325	128	2,803	2,635	8,596	" "	9,531
1975 - Jan.	333	116	2,990	2,870	5,377	" "	6,312
Feb.	352	157	4,540	4,381	4,799	" "	5,734
Mar.	465	166	4,954	4,805	7,162	" "	8,097
Apr.	635	174	6,159	5,913	5,979	" "	6,914
May	517	156	5,505	5,340	5,128	" "	6,063
June	453	151	6,494	6,169	4,889	" "	5,824
Total	10,116	7,001	125,176	108,742	143,442	28,985	172,427
Monthly Average	326	226	4,038	3,507	41,627	935	5,562



assigned to each month to represent 1/31 of the original purchase price of four vehicles, bringing the total monthly average cost to \$5,562.

To ascertain whether or not Transportation Project operations have gotten progressively more efficient, the input, or cost of services, is set at a fixed amount (\$1,000) and we calculate number of clients served for every \$1,000 spent. Obviously, if the number increases, project operations have grown more efficient, and project dollars are going farther.

At the beginning of the survey period, the number of clients served per \$1,000 is about 40 (see Table 2). There is evidently a steady upward trend to the end of the survey period in mid-1975, when \$1,000 of expenditures was serving about 100 people, about  $2\frac{1}{2}$  times the number served initially. The average number of clients served per \$1,000 is 70.5.

The value of this trend was measured using the method of least squares. It is estimated that the productivity level per given



## TRANSPORTATION OPERATING EFFICIENCY

	Operating Cost	No. of Clients Served	No. of Clients Served Per \$1,000 Cost	Time Series		
1972 - Dec.	\$ 4,565	168	36.8	-15	-552.0	225
1973 - Jan.	4,455	165	37.0	-14	-518.0	196
Feb.	3,371	162	48.1	-13	-625.3	169
Mar.	3,526	273	77.4	-12	-928.8	144
Apr.	3,734	275	73.6	-11	-809.6	121
May	3,697	280	75.7	-10	-757.0	100
June	5,418	333	61.5	-9	-553.5	81
July	3,340	307	91.9	-8	-735.2	64
Aug.	3,898	282	72.3	-7	-506.1	49
Sept.	4,718	278	58.9	-6	-353.4	36
Oct.	3,330	298	89.5	-5	-447.5	25
Nov.	3,828	319	83.3	-4	-333.2	16
Dec.	3,799	313	82.4	-3	-247.2	9
1974 - Jan.	5,414	264	48.8	-2	-97.6	4
Feb.	3,803	227	59.7	-1	-59.7	1
Mar.	4,171	267	64.0			
Apr.	3,749	308	82.2	1	82.2	1
May	4,058	310	76.4	2	152.8	4
June	4,818	322	66.8	3	200.4	9
July	4,307	396	91.9	4	367.6	16
Aug.	4,949	376	76.0	5	380.0	25
Sept.	5,710	355	62.2	6	373.2	36
Oct.	4,947	489	98.8	7	691.6	49
Nov.	3,907	269	68.9	8	551.2	64
Dec.	8,596	325	37.8	9	340.2	81
1975 - Jan.	5,377	333	61.9	10	619.0	100
Feb.	4,799	352	73.3	11	806.3	121
Mar.	7,162	465	64.9	12	778.8	144
Apr.	5,979	635	106.2	13	1,380.6	169
May	5,128	517	100.8	14	1,411.2	196
June	4,889	453	92.7	15	1,390.5	225
Total	\$ 143,442	10,116	70.5		2,001.5	2,480



input increased 1.1% every month, totaling a 41.5% increase for the entire 31-month period. The trend line may be expressed as:

$$Y = .807x + 70.5$$

(Y represents the number of clients served per \$1,000

X represents the number of the time series 12/1/72-6/30/75)

.807 indicates the value of the slope of the trend line, which is equal to tangent 39°

#### Cost of Services vs. Value of Service

The cost of the services rendered by the Transportation Project refers, as explained above, to the operating expenses plus the pro-rated cost of equipment. The value of services offered by the project is harder to determine. It is necessary to find out what passengers carried would have to pay for the same service if AHCFC vehicles were not available. In other words, what are prevailing rates for similar services in the same locality. However, the problem is that similar services are simply not available in this locality, as explained in the Introduction of this report. Therefore, a slightly more general basis for comparison was used: usual and customary charges for such services were taken from the California State Schedule of Maximum Allowances (State of California, Department of Health,



1974). This sets forth a base charge of \$8.80 per passenger plus a supplemental charge of \$0.65 per mile. Using these and AHCFC figures, a ratio of operating costs to operating services value can be expressed.

On the average, it cost the AHCFC \$0.83 to produce \$1.00 of service throughout the survey period (see Table 3). Initially, costs exceeded value. For the first three months of operation it cost the AHCFC \$1.47, \$1.47, and \$1.28 respectively to produce \$1.00 of service. A breakeven point was reached in May 1973 and by the end of the survey period, the AHCFC had very efficiently reduced the cost of producing \$1.00 of service to \$0.58. The relationship between cost and value is graphically displayed in Figure 3.

#### Utilization of Resources

AHCFC vehicles carried an average of 1.5 passengers for each trip made--one way or round trip--during the survey period. Monthly figures and percentages appear in Table 4. Although the nominal capacity of each vehicle is 10 passengers, consideration of such factors as passenger comfort and the need to carry medical equipment, including oxygen tanks, caused a downward



## TRANSPORTATION COST VS. VALUE OF SERVICE

	Base Rate @ \$8.80 One Way	Supplemental Charge @ \$0.65 Per Mile	Total Value of Service	Total Cost of Service	Cost Spent to Produce \$1.00 of Service
1972 - Dec.	2,487	1,243	3,720	5,500	1.47
1973 - Jan.	2,442	1,218	3,660	5,390	1.47
Feb.	2,398	1,195	3,593	4,306	1.28
Mar.	4,041	2,142	6,183	4,461	.72
Apr.	4,070	2,030	6,100	4,669	.77
May	4,144	2,068	6,212	4,632	.75
June	4,929	2,458	7,387	6,353	.86
July	4,544	2,266	6,810	4,275	.63
Aug.	4,174	1,957	6,131	4,833	.79
Sept.	4,115	2,049	6,164	5,653	.92
Oct.	4,405	2,199	6,604	4,265	.65
Nov.	4,828	2,408	7,236	4,713	.66
Dec.	4,682	2,326	7,008	4,734	.68
1974 - Jan.	3,949	1,969	5,918	6,349	1.07
Feb.	3,236	1,613	4,849	4,738	.98
Mar.	3,947	1,971	5,918	5,106	.86
Apr.	4,662	2,324	6,986	4,684	.67
May	4,802	2,380	7,182	4,993	.70
June	4,817	2,402	7,219	5,753	.80
July*	3,903	1,960	5,863	5,242	.89
Aug.	5,565	2,775	8,340	5,884	.71
Sept.	5,255	2,620	7,875	6,645	.84
Oct.	8,004	3,412	11,416	5,882	.52
Nov.**	4,499	824	5,323	4,842	.91
Dec.	5,377	1,713	7,090	9,531	1.34
1975 - Jan.	5,510	1,860	7,376	6,312	.86
Feb.	5,948	2,848	8,796	5,734	.65
Mar.	7,939	3,123	11,062	8,097	.73
Apr.	10,729	3,843	14,572	6,914	.47
May	8,826	3,471	12,297	6,063	.49
June	7,572	4,010	11,582	5,824	.50
Total	155,799	70,683	226,482	172,427	.76
Monthly Average	5,025	2,280	7,395	5,562	.83

\* one-way trip at 88%

\*\* vans being repainted







UTILIZATION OF TRANSPORT CAPACITY

	Passenger-Miles	Seat-Miles	Utilization in Percentage (%)
1972 - Dec.	1,912	4,870	40.0%
1973 - Jan.	1,874	5,622	33.3
Feb.	1,839	5,517	33.3
Mar.	3,295	9,885	33.3
Apr.	3,123	8,517	
May	3,181	9,543	33.3
June	3,781	6,302	60.0
July	3,486	5,890	59.2
Aug.	3,010	5,311	56.7
Sept.	3,153	6,306	50.0
Oct.	3,383	6,766	50.0
Nov.	3,705	6,946	53.3
Dec.	3,579	7,158	50.0
1974 - Jan.	3,029	8,261	36.7
Feb.	2,482	7,518	33.0
Mar.	3,032	9,096	33.3
Apr.	3,576	10,728	33.3
May	3,662	10,986	33.3
June	3,695	11,085	33.3
July	3,015	9,045	33.3
Aug.	4,262	12,786	33.3
Sept.	4,031	12,093	33.3
Oct.	5,249	11,248	46.7
Nov.	1,268	3,458	36.7
Dec.	2,635	3,162	83.3
1975 - Jan.	2,870	2,969	96.7
Feb.	4,381	5,974	73.3
Mar.	4,805	5,148	93.3
Apr.	5,913	4,927	120.0
May	5,340	4,855	110.0
June	6,169	6,169	100.0
Total	108,742	228,051	47.7



revision of the capacity of these vehicles to 3 passengers. It is evident from Table 4 that while the Transportation Projects' vehicles were underutilized until approximately the end of 1974, they have since been consistently used to capacity. The overall utilization rate for the survey period was 47.7%.

About 13% of the total mileage logged by these vehicles has not been under load; that is, they were not carrying passengers, usually because they were on the way to pick someone up or had just dropped someone off. Effective dispatching reduced this percentage to about 5% at the end of the survey period.

#### Achievement

In addition to the broad, categorical objectives set for the AHCFC as a whole, certain detailed goals were originally established specifically for the first 12 months' operation of the Transportation Project:

- (1) To improve medical transportation for 5,000 MNA residents
- (2) To equip the four original vehicles with fixed or portable equipment necessary to the safe and effective transportation of clients



(3) To hire two additional drivers to meet expanded transportation needs

At the time that these objectives were formulated, in late 1972, there were according to census data about 34,7000 MNA residents. According to the State of California's Department of Health report on Medi-Cal Services and Expenditures (1974), about 9,000 cases required medical attention monthly. Obviously, there was more than sufficient demand for services such as the AHCFC proposed to offer. However, AHCFC output summary reports state that the average of 326 clients served per month constitutes 95% of the requests received. Even if the four vehicles currently available operated at full capacity without any empty running, they could carry a monthly total of only about 780 patients, or 9,360 per year. Therefore, it appears that the original goal of 5,000 clients was, in a pragmatic sense, quite accurate. In fact, the yearly average so far is about 4,912.

Objectives 2 and 3 have been or are currently being achieved. All vehicles have two-way radios, lights, and portable steps and handrails.



## Potential

Projected 1976 Work Volume. There has been a gradual but consistent upward trend both in the absolute volume of clients served, trips made, and mileage covered and in the amount of service produced per given cost. It can be projected that the Transportation unit will in the next year carry 460 patients monthly in 320 trips covering 5,708 capacity miles. It is anticipated that the average trip will carry 3 clients and that the time under load for each vehicle will stay at about 5%.

Cost Reduction. The cost to produce a unit of output has been consistently dropping (see Table 5). If this pattern continues, the cost of carrying a patient one mile will drop to \$0.92, meaning that the average cost of service per client will drop from \$17.05 to \$10.70 in 1976.

Expansion of Resources. The two additional vehicles currently being sought by the AHCFC will be purchased through an arrangement with the State of California that will require the corporation to pay 20% of the total cost. Including lifts,



TABLE 5

OPERATING COST PER PASSENGER-MILE

1972 - Dec.	\$ 2.39
1973 - Jan.	2.38
Feb.	1.84
Mar.	1.07
Apr.	1.20
May	1.17
June	1.43
July	.96
Aug.	1.30
Sept.	1.50
Oct.	.98
Nov.	1.03
Dec.	1.06
1974 - Jan.	1.78
Feb.	1.53
Mar.	1.38
Apr.	1.05
May	1.11
June	1.30
July	1.43
Aug.	1.16
Sept.	1.42
Oct.	.94
Nov.	3.08*
Dec.	3.26*
1975 - Jan.	1.87
Feb.	1.10
Mar.	1.40
Apr.	1.01
May	.96
June	.79
Monthly Average	\$ 1.32

\* two vehicles under repair



tie-down devices, and radios for one 12-passenger van and one 16-passenger van, the total equipment cost will be \$45,645. Of this, the AHCFC will pay \$9,129. This amount is in the process of being obtained by the corporation.

Effect of Completion of Primary Care Center. Completion of the primary care center should have a very strong effect on the AHCFC transportation component. For one thing, the very presence of the center will dramatically advertise the availability of medical services. By association, this publicization should increase demand for medical transportation. However, trips made to the center will obviously be much shorter than trips made now. Some patients will still be treated by other medical facilities, naturally, but the existence of the primary care center should cause fundamental changes in the nature of transportation operations.

#### Recommendations

- (1) The average patient load per vehicle trip should be increased



to minimize unutilized vehicle capacity. A higher level of vehicle utilization will correlate with greater efficiency. More intensive utilization will also cause a thinner spreading of overhead costs. In other words, additional patient load can be achieved without a proportionate increase in costs. At present, AHCFC is characterized by a high level of fixed costs relative to the total.

(2) Empty running should be further minimized. The corporation now requires 24-hour advance notice from clients before providing all but emergency services, so it should not be difficult to systematically dispatch vehicles so as to avoid deadheading. Information such as that shown in Table 6, which lists service destinations in order of frequency with which they are requested, will be of use in organizing more effective vehicle distribution.

(3) Insurance premiums can be reduced from their fairly high current annual total of \$1,700 by using an assigned risk training program. Under this program, though, premiums discriminate against undesirable risks, so drivers must be carefully screened to be sure that they have safe driving records. Further premium



TABLE 6

FREQUENCY OF TRANSPORTATION SERVICES BY DESTINATION  
IN DESCENDING ORDER OF FREQUENCY  
SURVEY PERIOD 12/1/72 - 6/30/75

Service Destination	No. of Clients Served	Percentage	Accumulative Percentage
SF General Hospital	2,095	20.7%	20.7%
University of California Hospital	1,845	18.2	38.9
Letterman General Hospital	289	2.9	41.8
Doctor's Office, 1700 Market Street	188	1.9	43.7
Children's Hospital	187	1.8	45.5
St. Luke's Hospital	183	1.8	47.3
Medical Center, 2300 Webster Street	178	1.8	49.1
Franklin Hospital	137	1.4	52.1
St. Mary's Hospital	165	1.6	50.7
Presbyterian Hospital	90	.9	53.0
Other	<u>4,759</u>	<u>47.0</u>	<u>100.0</u>
Total	10,116	100.0%	100.0%



reduction may be reduced through a more aggressive training program.

(4) Vehicles should be equipped with access doors on both sides, to avoid the undesirable and dangerous situation of clients boarding or leaving the street side of a vehicle parked or stopped on the left side of a street.



### The Home Care Project

The Home Care project was preceded by a service called the Mother's Helper program, which was designed to provide babysitting services for MNA residents solely while they were receiving medical services. It was anticipated that this service would continue to be offered through the SEAHC of the primary care center once construction was completed.

During this first phase, the Mother's Helper program was funded by the state, under a Public Law 89-749 grant. This was an interim grant, allowed with the understanding that the project would eventually be incorporated into the Model Cities program. The state grant was terminated on June 30,



1971, and transfer of the Home Care project to the AHCFC was formally effected on December 1, 1972.

The basic problem addressed by the Home Care project is that a large number of MNA residents are either chronically ill or home-bound, such as the elderly, or are rendered somewhat helpless when in need of health and social services. It is estimated (1970 Census data) that there are about 2,000 families in the MNA with children under six. About 35% of these are single-parent families, most of whom cannot afford to hire housekeepers or babysitters. This, of course, means that children are often left alone for long periods of time, and housework goes undone during illnesses. There are also about 2,600 senior citizens in the BV-HP MNA. Though many of these residents are eligible for some Medicare benefits, most of them cannot afford private nurses or housekeepers during illnesses or convalescence.

Consequently, the scope of services provided by the Home Care project is greater than that available from the predecessor



Mother's Helper program. Home Care offers childcare, housekeeping/homemaking and old-age care to appropriate medically indigent clients. Typical Home Care services include: bathing, clothing, feeding, supervising children during parents' absence; and cleaning, marketing, preparing meals, and running errands for infirm clients. Contingent Home Care project objectives include evaluating similar programs for potential adaptation to the Home Care Project or for expansion of services, assessing the effectiveness of the present services, tying-in to job-related training programs, and coordinating Home Care services with other health and social agencies.

Personnel. This component is staffed by an administrative assistant, one Home Care coordinator, two full-time Home Care workers, and seven part-time Home Care workers. A receptionist/clerk and a janitor are shared with other AHCFC components.

Service Hours. Regular child and adult care, or housekeeping and homemaking activities are provided five days a week, eight hours a day. Advance notice of 24 hours is required before services can be rendered. Emergency ambulance service is available every



day from 8:30 a.m. to 12:00 p.m. Priority is given to low-income residents, senior citizens, single-parent families, and the physically and mentally handicapped.

#### Efficiency Measurements

This section, like the analogous one in the analysis of the Transportation project, attempts to compare output with input. In the case of the Home Care Project, output refers to the number of residents to whom Home Care Services were rendered. Input refers to the operating costs for this project, almost all of which are paid by Model Cities funds. Table 7 shows monthly and aggregate totals for both the number of clients served and corresponding operating costs. Note that records for elderly care do not begin until November 1974, due to the fact that this aspect of Home Care services was first implemented at that time.

For the 31-month period, Home Care directly benefited a total of 3,181 residents, responding to 713 requests for child care, 1,859 requests for housekeeping, and 609 requests for old-age care. Respective monthly averages for these three categories



HOME CARE OUTPUT AND OPERATING COSTS

	No. of Clients Served	Child Care	Housekeeping	Care for the Elderly	Operating Cost
1972 - Dec.	89	53	36		5,580
1973 - Jan.	68	47	21		5,445
Feb.	46	40	6		4,119
Mar.	87	55	32		4,309
Apr.	71	51	20		4,563
May	61	38	23		4,518
June	50	30	20		6,623
July	61	49	12		4,082
Aug.	72	21	51		4,764
Sept.	52	36	16		5,766
Oct.	58	38	20		4,070
Nov.	64	4	60		4,678
Dec.	73	13	60		4,644
1974 - Jan.	68	13	55		6,617
Feb.	61	13	48		4,649
Mar.	71	15	56		5,097
Apr.	80	2	78		4,582
May	69	17	52		4,959
June	98	14	84		5,889
July	75	4	71		5,265
Aug.	98	6	92		6,049
Sept.	92	2	90		6,978
Oct.	123	2	121		6,046
Nov.	150	1	90	59	4,775
Dec.	122	13	59	50	10,507
1975 - Jan.	167	19	80	68	6,571
Feb.	188	21	90	77	5,865
Mar.	241	27	116	98	8,753
Apr.	218	24	105	89	7,307
May	207	23	99	85	6,268
June	201	22	96	83	5,976
Total	3,181	713	1,859	609	175,314
Monthly Average	102	23	60	20	5,655

76\*

\* for 8-month period

MODEL CITIES ————— EVALUATION 1976



of service are: 23 (child care), 60 (housekeeping/homemaking), and 20 (elderly care). For the same period, \$175,314 was spent on operating costs, for an average monthly expenditure of \$5,655.

Over the entire survey period (12/72-6/75), it cost the project an average of \$55.11 to serve each client. In late 1972 and early 1973, this cost was about \$74.65. It was down to \$65.13 in early 1974, and had dropped remarkably to \$31.23 at the end of the survey period in mid-1975. In June 1975, it cost Home Care one-third of what it had cost in January 1973 to offer service to an average client. This is remarkably efficient cost reduction and improvement of operations. In fact, monthly costs are quite stable, so the improvement in unit cost means that productivity--the number of services offered--tripled over this 31-month time period.

To turn the above approach around, we can also calculate how many residents are served with a standardized operating cost each month. This will provide a good picture of productivity per given cost on both a month-to-month and an overall basis.



As Table 8 shows, an average of about 18 clients were served per \$1,000 during the survey period. At the start of the survey period, \$1,000 served 13 residents. By the middle of the same period, the same amount served 15 residents, and by mid-1975, \$1,000 served 32 clients. Home Care seems to have consistently improved its productivity over the period measured. The same least-squares method used in the Transportation analysis was used to calculate the rate, or trend, of Home Care improvement:

$$Y = .547x + 18.1$$

(Y represents number of residents served per \$1000

X represents time series over the survey period)

.547 represents the slope of the trend line, or  
tangent 30°

Home Care has been improving by an average of 3% monthly, and has been, on the average, serving an additional three clients each month with the same amount of operating funds. This is a very laudable and promising upward trend.



HOME CARE OUTPUT PER \$1,000

	No. of Clients Served Per \$1,000 Cost	Time Series		
1972 - Dec.	15.9	-15	-238.5	225
1973 - Jan.	12.5	-14	-175.0	196
Feb.	11.2	-13	-145.6	169
Mar.	20.2	-12	-242.4	144
Apr.	15.6	-11	-171.6	121
May	13.5	-10	-135.0	100
June	7.5	-9	-67.5	81
July	14.9	-8	-119.2	64
Aug.	15.1	-7	-105.7	49
Sept.	9.0	-6	-54.0	36
Oct.	14.3	-5	-71.5	25
Nov.	13.7	-4	-54.8	16
Dec.	15.7	-3	-47.1	9
1974 - Jan.	10.3	-2	-20.6	4
Feb.	13.1	-1	-13.1	1
Mar.	13.9	0		
Apr.	17.5	1	17.5	1
May	13.9	2	27.8	4
June	16.6	3	49.8	9
July	14.2	4	28.4	16
Aug.	16.2	5	81.0	25
Sept.	13.2	6	26.4	36
Oct.	20.3	7	142.1	49
Nov.	31.4	8	251.2	64
Dec.	11.6	9	104.4	81
1975 - Jan.	25.4	10	254.0	100
Feb.	32.1	11	353.1	121
Mar.	27.5	12	330.0	144
Apr.	29.8	13	387.4	169
May	33.0	14	462.0	196
June	33.6	15	504.0	225



### Cost of Services vs. Value of Services

As was done above, in the Transportation section, the California State Schedule of Maximum Allowances was used to assign a monetary value to services received by Home Care clients. This value should approximate the price residents would have to pay for similar service if Home Care services were not available.

According to this schedule, the \$175,314 spent by Home Care over 31 months purchased services worth \$212,556. That is, to purchase \$1.00 worth of service, the Home Care Project spent \$0.82. Operating costs are slightly exceeded by "revenues," which is not an uneconomical position, even for a private medical facility.

However, there have been erratic fluctuations in the ratio of costs to value of services (see Table 9), and the break-even point was not reached until January 1975 (see Figure 4). The 25 months of deficit ratio is probably to some degree attributable to the reorganization attendant upon incorporation of the Mother's Helper program into the AHCFC as the Home Care



HOME CARE COST VS. VALUE OF SERVICE

	Cost of Service	Accumulative Cost	Value of Service	Accumulative Value	Cost to Produce \$1.00 of Service
1972 - Dec.	5,580	5,580	5,947	5,947	.94
1973 - Jan.	5,445	11,025	4,544	10,491	1.20
Feb.	4,119	15,144	3,074	13,565	1.34
Mar.	4,309	19,453	5,813	19,378	.78
Apr.	4,563	24,016	4,744	24,122	.96
May	4,518	28,534	4,076	28,198	1.11
June	6,623	35,157	3,341	31,539	1.98
July	4,082	39,239	4,076	35,614	1.00
Aug.	4,764	44,003	4,811	40,426	.99
Sept.	5,766	49,769	3,475	43,901	1.66
Oct.	4,070	53,839	3,876	47,777	1.05
Nov.	4,678	58,517	4,276	52,053	1.09
Dec.	4,644	63,161	4,878	56,931	1.46
1974 - Jan.	6,617	69,778	4,544	61,475	1.14
Feb.	4,649	74,427	4,076	65,551	1.07
Mar.	5,097	79,524	4,744	70,295	.86
Apr.	4,582	84,106	5,346	75,641	1.08
May	4,959	89,065	4,611	80,252	.90
June	5,889	94,954	6,548	86,800	1.05
July	5,265	100,219	5,012	91,812	.93
Aug.	6,049	106,268	6,548	98,360	1.14
Sept.	6,978	113,246	6,147	104,507	.74
Oct.	6,046	119,292	8,219	112,726	.48
Nov.	4,775	124,067	10,023	122,749	1.29
Dec.	10,507	134,574	8,152	130,901	.59
1975 - Jan.	6,571	141,145	11,159	142,060	.47
Feb.	5,865	147,010	12,562	154,622	.54
Mar.	8,753	155,763	16,104	170,726	.50
Apr.	7,307	163,070	14,567	185,293	.45
May	6,268	169,338	13,832	199,123	.44
June	5,976	175,314	13,431	212,556	.82
Total	175,314	175,314	212,556	212,556	
Monthly Average	5,655		6,857		.97



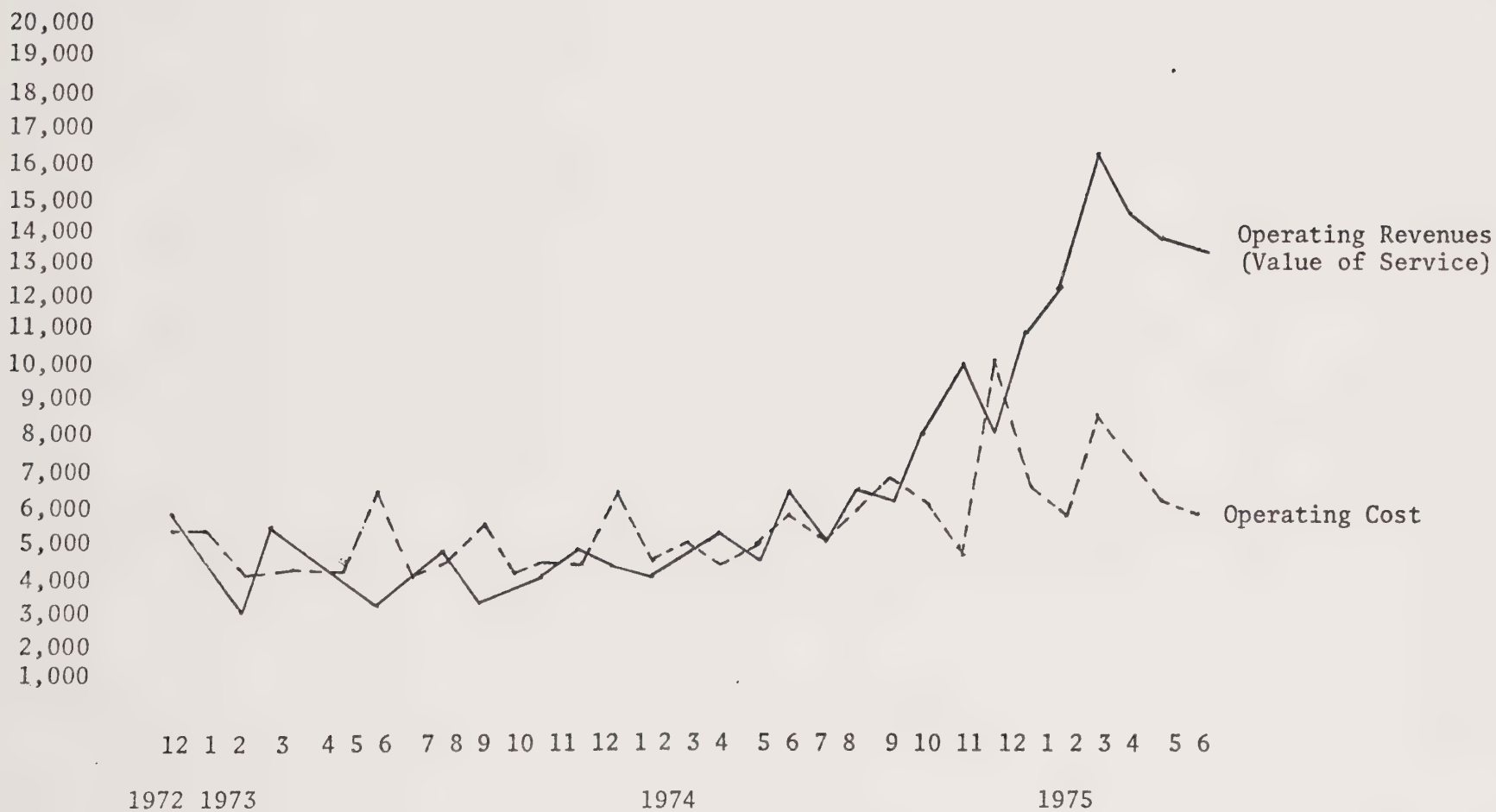


FIGURE 4: COST VS. VALUE OF SERVICE (HOME CARE)



Project, and also to the fact that, until late 1974, the Home Care Project had not really expanded its services into the old-age care field and was still concentrating on babysitting and light housekeeping services.

#### Achievement

Specific objectives formulated for the Home Care Project included the following:

- (1) Provision of Home Care services to 2,000 MNA residents during the first year of operations
- (2) Hiring three additional Home Care workers to promote use of medical facilities by 1,000 MNA residents

In regard to objective (1), BV-HP morbidity ratios (Department of Health, Medi-Cal Services and Expenditures Report, State of California, 1974) indicate that approximately 82 residents per month, or 984 annually, might require some form of Home Care service. The anticipated goal of serving 2,000 residents thus more than satisfies the potential projected maximum demand. In fact, during its first year, the Home Care Project served 1,231 clients, which is 62% of the projected maximum, but which far



exceeds the 984 statistically probable requests inferred from morbidity figures. It should also be noted that of the 2,600 BV-HP senior citizens plus the 2,000 or so BV-HP families with children under six years of age, a potential yearly maximum of perhaps 7,000 Home Care service requests might also be generated, in addition to those 984 residents who simply require some form of post-hospitalization or other medically related Home Service care. So the total potential demand might conceivably be as high as 8,000 or so service requests per year. In this case, clearly, the projected objective of 2,000 clients served falls far below the potential number of requests.

In short, there is a lack of concision in the articulation of this objective. Unless categories of Home Care clients are more clearly distinguished, and priorities among them established, it will continue to be difficult to predict the degree of correlation between Home Care objectives and actual community needs.



### Potential

Home Care is currently planning to cut service-time to clients in order to meet a growing demand for its services. If it is indeed exposed to a greater percentage of the potential 7,000-8,000 client requests than the 2,000 or so that it served last year, it will have to greatly expand its staff.

The Home Care Project has an unrealized source of revenue in its MediCal and group-aid clientele. Of the 11,756 residents eligible for these funds in the MNA, about 35 are anticipated to need AHCFC Home Care services every month. Reimbursement to Home Care from the state for these clients can amount to \$90.23 per user, or about \$3,200 monthly. Since this is about half of the average of \$5,700 that Home Care expends each month for operating costs, it would seem that this is a source of revenue that the project cannot afford to ignore.

It should be stressed that there is a very powerful financial incentive for continued and expanded operation of this project.



Of the total BV-HP population, about 400 persons are admitted to hospitals each months (Department of Health, Medi-Cal Services and Expenditures Report, State of California, 1974). Of these, about 40 need extended post-hospitalization home care or nursing. If this extended care is not available, the average client would be required to stay in the hospital about 16 days, which, at the low rate of \$100 per day would cost \$1,600. In other words, this average monthly group of people would expend \$64,000 monthly if no home or nursing care services were available in the MNA. If we assume that some of the residents may be eligible for MediCal, we can see that the \$90.23 per user potential reimbursement to Home Care, even for 40 clients, is only \$3,600 monthly, which is far below the hospital costs otherwise incurred. In short, the Home Care Project offers a necessary service that would otherwise be very costly to obtain for these clients and it offers these services at comparatively very low rates.



### Recommendations

The services that the Home Care Project offered to over 3,000 MNA residents during the survey period have obviously contributed to the overall AHCFC goal of promoting accessibility to comprehensive health care services. The project clearly deserves acknowledgement and encouragement.

It might be useful for the AHCFC to establish these priorities for screening potential clients:

- (a) Child and Adult Care. Priority should be given to members of single-parent families who have low incomes and more severe medical problems. Single parents without medical complications should be given lower priorities.
- (b) Housekeeping and Homemaking. Currently these services are available to three client categories: low-income, senior citizen, and single-parent family. In each case, priority should be given to those with more severe medical considerations.
- (c) Elderly Care. Further screening is necessary to determine if clients require post-hospitalization care and if a doctor's diagnosis is available that clearly stipulates the kind of home care or nursing treatment indicated.

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